1904MNRAS..64..291.

Wimbledon, with which he frequently made observations. In 1868 he communicated to the Society observations of the transit of *Mercury*, and in 1870 observations of *Algol*, of Sun-spots, and of Occultations. Most of his papers in the *Monthly Notices* are, however, concerned with graphical methods of computation. In 1876 he describes an instrument for solving spherical triangles. The very ingenious method by which he predicted graphically the times of occultations, eclipses, &c., is developed in several papers; for instance, in 1873 he applied it to predict the times of the transit of *Venus* at various stations, and in 1900 to the times of commencement and end of the solar eclipse of that year.* He published an account of his method separately in 1869, and brought out a second edition of it last year. Another paper by Mr. Penrose, which is somewhat of a *tour de force* in the use of graphical methods, was published in the *Monthly Notices* in 1882, "On a Method for Finding the Elements of the Orbit of a Comet by a Graphical Process."

Another subject on which Mr. Penrose wrote was the Orientation of Greek Temples. His first paper is published in the *Philosophical Transactions* for 1893. He proceeded on the theory that in any temple oriented within the solstitial limits of its latitude the axis was so directed that, on the great festival of the year, the first beam of the rising Sun should fall upon the statue centrally placed in the temple, or on the incense altar in front of it; and, further, that the orientation (and consequently day of festival) would be so arranged that the approach of Sunrise would be indicated to the priest by a bright star visible from the *adytum*, and therefore of the same declination as the Sun and right ascension one hour or so earlier than the Sun. If a bright star is identified which satisfies this condition the date of the temple may be determined from the precessional motion. Mr. Penrose found suitable stars for twenty-eight temples, whose orientations ranged from 21° N. to 18° S., and assigned dates to the building of them. He supplemented this paper in 1897, and in 1901, with Sir Norman Lockyer, endeavoured to fix the date of Stonehenge.

Mr. Penrose received the Royal Gold Medal of the Institute of British Architects in 1883. He was elected an Honorary Fellow of Magdalene College, Cambridge, in 1885. In 1886 he was appointed director of the British Archæological Society at Athens, and in 1890 Honorary Antiquary to the Royal Academy. He was elected a Fellow of the Royal Society in 1894, and had been a Fellow of the Royal Astronomical Society since the 8th of February 1867.

Mr. Penrose died at his residence, Colebyfield, Wimbledon, on the 17th of February 1903.

HENRY DE WORMS, first BARON PIRBRIGHT, was born in London in 1840. He was the third son of S. B. de Worms,

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* See *Monthly Notices*, vol. lx. p. 484.

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hereditary Baron of the Austrian Empire, by his wife Henrietta, daughter of Samuel Moses Samuel. Both on his father's and mother's sides he was descended from great mercantile families. Henry de Worms was educated at King's College, London, of which he became a Fellow in 1863. He was first intended for the medical profession, but was ultimately entered as a student of law in the Inner Temple, in 1860, and was called to the Bar in 1863. In 1862 he published a book, *The Earth and its Mechanism; being an Account of the various proofs of the Rotation of the Earth.* In 1874 his family were permitted by the late Queen to use their Austrian titles in England. After other attempts to enter Parliament he was in 1880 returned as one of the Conservative members for Greenwich, and on the reorganisation of that constituency was elected member for the Toxteth division of Liverpool. In 1872 he had published a book on the Austro-Hungarian Empire, and in 1877 another on England's policy in the East; ten years later he translated the *Memoirs of Count Beust.* From 1873 to 1886 he was president of the Anglo-Jewish Association.

Under Lord Salisbury's administration he was appointed in 1885 Parliamentary Secretary to the Board of Trade, and in 1888 Under-Secretary for the Colonies. In 1888 he was raised to the Privy Council, and named a plenipotentiary to the International Conference on Sugar Bounties. He presided at the Conference in London, and with Lord Salisbury signed for Great Britain the treaty for the abolition of the Bounties, but economic and political influences prevented the Convention coming into force. The West Indian trade continued to decline, and De Worms, who had been created Lord Pirbright in 1895, continued the agitation. A further conference on sugar bounties was held in Brussels, resulting in the Convention of 1902, which, however, was materially different from the Convention of London, and Lord Pirbright opposed its ratification by the English Government.

He lived in his later years at Henley Park, Guildford, where he was well known for his numerous charities. He married first the eldest daughter of Baron Todesco, of Vienna, by whom he had three daughters, and secondly Sarah, sister of Sir G. Faudel Phillips. Lord Pirbright leaves no heir.

He was elected a Fellow of the Society on the 13th of December 1861. He died at his London residence in Grosvenor Place on the 9th of January 1903.

HAROLD SEWARD was a son of the late Mr. James Seward, of Liverpool and Wandsworth. He was born in 1862 and educated at the Liverpool Institute, where he was Tate Scholar. He obtained a Mathematical Scholarship at Balliol, which he held from 1880 to 1884. He was also a Gilchrist Scholar of the London University. At Oxford he obtained a First Class in Mathematical Moderations in 1882, a Second Class in Natural Science in 1883, and a First Class in Final Honours Mathematics

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